GLASS COMPOSITION AND ITS PRODUCTION

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Abstract of JP2000053442

PROBLEM TO BE SOLVED: To produce a glass compsn. having wide-band light emission characteristics and ferromagnetism by which the compsn. can be used for a laser or light amplifier having laser oscillation or light amplification a ction in a considerably wide wavelength range whose median wavelength is in the band of 1.2-1.6 &mu m important to an optical comm unication wavelength region and can also be used for a powdery permanent magnet. SOLUTION: By using a glass compsn. consisting essentially of at least one of SiO2 or GeO2, at least one among Al2O3, Ga2O3 or In2O3, ZnO and at least one of TiO2 or Nb2O5 to control glass synthesis and reheating treatment conditions, Ni+ ions as light emitting seeds and fine particles 3 of ferromagnetic metal Ni in the resultant glass are formed.